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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,361	03/05/2002	Phil Delurgio	DEM1P010	9613

36088 7590 02/17/2006

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EXAMINER	
BORISSOV, IGOR N	
ART UNIT	**PAPER NUMBER**
3639	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/092,361	DELURGIO ET AL.	
	Examiner	Art Unit	
	Igor Borissov	3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/21/2005 has been entered.

Response to Amendment

Amendment received on 11/21/2005 is acknowledged and entered. Claims 15-17 have been canceled. Claims 1, 4, 5, 8, 11, 12 and 18-20 have been amended. New claims 21-23 have been added. Claims 1-14 and 18-23 are currently pending in the application.

Preliminary Notes

The current specification indicates that this application is a Continuation-in-part to co-pending U.S. Patent Application No. 10/007,002 filed November 30, 2001, SCRULE RELAXATION AND SUBSET OPTIMIZATION SYSTEM". However, after reviewing specifications of both applications the examiner came to conclusion that U.S. Patent Application No. 10/007,002 does not have adequate support for the claimed subject matter of the current patent application. Therefore, the current specification is not entitled for the benefit of the earlier filing date, and the effective date for the current application is its filing date 3/05/2002.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18 and 21 are confusing, because the following recitation: "wherein the at least one constrain *prohibits two stores* of the plurality of stores *from being in the same cluster*" is in contradiction to parent Claims 5 and 12, which recite: "*placing stores* that meet the constraints and with the closest optimal combinations *in the same cluster* of the plurality of store clusters".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:
Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 and 18-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In determining whether the claimed subject matter is statutory under 35 U.S.C. 101, a practical application test should be conducted to determine whether a "useful, concrete and tangible result" is accomplished. See *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1359-60, 50 USPQ2d 1447, 1452-53 (Fed. Cir. 1999); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1600 (Fed. Cir. 1998).

An invention, which is eligible or patenting under 35 U.S.C. 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a "use, concrete and tangible result". The test for practical application as applied by the examiner involves the determination of the following factors"

(a) "Useful" – The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the

claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

i. the utility need not be expressly recited in the claims, rather it may be inferred.

ii. if the utility is not asserted in the written description, then it must be well established.

(b) "Tangible" – Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium, which enabled its functionality to be realized.

(c) "Concrete" – Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

The claims, as currently recited, appear to be directed to nothing more than a series of steps including collecting, providing, creating and re-optimizing data (prices) without any useful, concrete and tangible result and are therefore deemed to be non-statutory. While these numbers may be concrete and/or tangible, there does not appear to be any useful result.

As per Claims1-7 and 18-20 the invention, as defined by the claims and as best understood merely manipulate an abstract idea or perform a purely mathematical algorithm without any limitation to a practical application in the technological arts. The invention is implemented on a computer; therefore, the invention is directed to the technological arts. However, the claimed invention just manipulates data representing prices.

The invention does not require physical acts to be performed outside the computer independent of and following the steps to be performed by a programmed

computer, where those acts involve the manipulation of tangible physical objects and result in the object having a different physical attribute or structure. See *Diamond v. Diehr*, 450 US at 187, 209 USPQ at 8. The steps of computer processing data representing re-optimizing data (prices) do not impose independent limitations on the scope of the claim beyond those required by the mathematical operation and abstract limitations because the re-optimized data (prices) are not actual measured values of physical phenomena. *In re Galnovatch*, 595 F.2d at 41 n.7, 201 USPQ at 145 n.7; *In re Sarker*, 588 F.2d at 1331, 200 USPQ at 135. The steps of "re-optimizing" have no direct effect on the physical world outside the computer. Thus, the claimed invention merely inputs data into the system and performs a mathematical algorithm without any limitation to a practical application as a result of the algorithm or outcome and is therefore deemed to be non-statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al. (US 6,910,017) in view of Jameson (US 6,219,649).

Claims 1 and 8. Woo et al. (Woo) teaches a computer-implemented method and system for optimizing prices, comprising:

collecting store specific information from a plurality of stores (C. 3, L. 64-67; C. 4, L. 1-47);

providing optimized combinations including optimized prices for a plurality of products for each individual store of the plurality of stores based on the store specific information wherein the optimized prices are generated under the demand, cost and

optimization rules (modeling equation and algorithm) constrains (C. 4, L. 1-47; C. 5, L. 65 – C. 6, L. 60; C. 7, L. 58-65);

creating a plurality of store clusters from the plurality of stores based on the closeness of the optimal combinations (aggregating historical data into item classes and subclasses in accordance with an item hierarchy/parameter (C3 L64-67, C4 L1-47), and using said aggregated data, including demand and cost of sales information, to determine optimal pricing information) (C. 2, L. 53-67; C. 3 L. 1-63; C. 9, L. 15-38).

While method steps disclosed in Woo indicate a continuation of the method, Woo does not explicitly teach re-optimizing step for re-optimizing prices for said store clusters.

Jameson teaches a computer-implemented method and system for price optimization, comprising: conducting initial price optimization to generate individual optimized scenarios (allocations) based on collected data and objective functions (specified parameters or constraints); grouping into clusters said allocations and identifying the allocations within each cluster that perform best against the scenarios within the cluster (C. 5, L. 41-49); and re-optimizing said individual scenarios with their objective functions for deviating from the average allocation (C. 3, L. 48-57; C. 9, L. 20-45). Furthermore, FIG. 2 in Jameson shows how individual-scenario optimizations can serve as good starting points for finding an overall optimal allocation and how clustering can facilitate optimization (C. 7, L. 60-62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Woo to include re-optimizing step for re-optimizing prices for said store clusters, as disclosed in Jameson, because it would advantageously allow to conduct price optimization considering uncertain constraints (Jameson; C. 5, L. 16-18).

Claims 2, 3, 9 and 9. See reasoning applied to Claims 1 and 8.

Claims 4 and 11. Woo teaches said method and system, further including assortment and promotion combinations (C. 5, L. 61-63; C. 7, L. 9-12).

Claims 5-7, 18-22, 12-14 and 21-23. See reasoning applied to Claims 1 and 8.

Response to Arguments

Applicant's arguments with respect to Claims 1-14 and 18-23 have been considered but are moot in view of the new ground(s) of rejection.

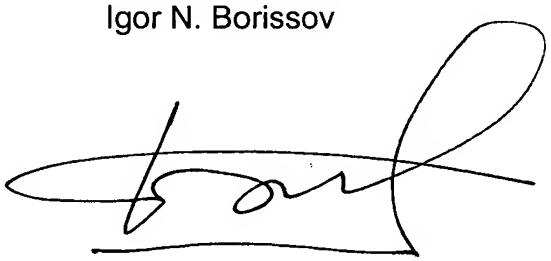
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see form PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igor Borissov whose telephone number is 571-272-6801. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Primary Examiner
Igor N. Borissov



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